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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/510,177

10/04/2004

Robert Alexander Howell

BAE 3055

6771

7590

12/13/2006

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EXAMINER

ROSENBERG, LAURA B

ART UNIT

PAPER NUMBER

3616

DATE MAILED: 12/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------|-------------------------------|--|
| Office Action Summary | Application No. 10/510,177 | Applicant(s) HOWELL ET AL. | |
| | Examiner Laura B. Rosenberg | Art Unit 3616 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 October 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>11/1/04</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Drawings

1. Figures 1-4 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are also objected to because the additional reference character "11" should be changed to reference character "17" in figure 7 so that upper stamped component (#11) and web (#17) are both appropriately labeled. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each

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drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The abstract of the disclosure is objected to because:

"opposites sides" should be changed to --opposite sides-- (lines 2, 3);

"a second upstanding flange portions" should be changed to --second upstanding flange portions-- (line 4).

Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 21, 23, and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 21, 23, and 25 recite the limitation "the fully returned flanges" in line 2. There is insufficient antecedent basis for this limitation in the claims.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komiya (4,798,397) in view of Layman (1,380,659). Komiya discloses a vehicular suspension arm (including control arm #2) comprising a metal component that has a structural I-beam section (best seen in figure 3; column 2, lines 53-55) and openings (for example, at both ends #2a, 2b) able to accept various other vehicle components. Komiya does not specifically disclose the I-beam shaped vehicular suspension arm being formed from two stamped components.

Layman teaches a link (for example, as seen in figure 16), comprising:

- Upper sheet metal stamped component (for example, left side component in figure 16) with a first outer face (for example, left face) and a first inner face (for example, right face), and comprising a first central web portion (for example, vertical portion) with two opposite sides (for example, upper and lower sides of vertical portion) and first upstanding flange portions (for example, horizontal portions at opposite ends of web) at the opposite sides of the first web portion
- Lower sheet metal stamped component (for example, right side component in figure 16) with a second outer face (for example, right face) and a second inner face (for example, left face), and comprising a second central web portion (for

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- example, vertical portion) with two opposite sides (for example, upper and lower sides of vertical portion) and second upstanding flange portions (for example, horizontal portions at opposite ends of web) at the opposite sides of the second web portion
- The first and second inner faces able to contact each other along a substantial portion of the first and second web portions (see figure 16)
 - The upper and lower stamped components able to be rigidly attached to each other to create a structural I-beam section (see figure 16), wherein the thickness of each upstanding flange portion is at least equal to the combined thickness of the first and second web portions (in a similar manner to applicant's claimed invention)
 - The upper and lower stamped components are press-formed from sheet metal of uniform thickness (page 1, lines 12-14; figure 16)
 - Each upstanding flange portion comprises a fully returned segment of the sheet metal (in a similar manner to applicant's claimed invention), whereby the thickness of each upstanding flange portion is at least double the thickness of each web portion (see figure 16)
 - The upper stamped component and lower stamped component are press-formed from sheet aluminum, sheet steel, or similar sheet metal materials (though specific sheet metal is not disclosed, "similar sheet metal materials" is sufficiently broad to embody any sheet metal)

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- The upper and lower stamped components are rigidly attached to each other along the first and second inner faces in a back-to-back configuration using bolting, welding, bonding, riveting or similar fastening means (for example, welding and brazing; page 1, lines 49-51, 105-108)
- Gap (for example, as can be seen between the joined inner faces and the joined flanges on opposite ends of the web portions) able to accommodate a welded joint (butt, fillet, or various other weld joints), the upper and lower components rigidly attached to each other by means of the welded joint (page 1, lines 49-51, 105-108; see figure 16; specific type of weld joint being a matter of obvious design choice)

- Openings (as can be seen in figures 1-7) able to accept various components

The examiner notes that although reference has been made to the embodiment of figure 16, other embodiments of the Layman reference may disclose similar features.

It would have been obvious to one skilled in the art at the time that the invention was made to modify the vehicular suspension arm of Komiya such that it comprised sheet metal stamped components as claimed in view of the teachings of Layman so as to provide a link that possesses great strength while is of extremely light weight and is inexpensive to produce (Layman: page 1, lines 15-20).

8. Claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seksaria et al. (2004/0075234A1) in view of Layman (1,380,659). Seksaria et al. disclose a vehicular suspension arm (including control arm #10) comprising an

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aluminum metal component (for example, including member #14) that has a structural I-beam section (best seen in figure 4) and openings (for example, within ears #66, 68) able to accept various other vehicle components. Seksaria et al. do not specifically disclose the I-beam shaped vehicular suspension arm being formed from two stamped components.

Layman teaches a link, as described above.

It would have been obvious to one skilled in the art at the time that the invention was made to modify the vehicular suspension arm of Seksaria et al. such that it comprised sheet metal stamped components as claimed in view of the teachings of Layman so as to provide a link that possesses great strength while is of extremely light weight and is inexpensive to produce (Layman: page 1, lines 15-20).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Austermann, Jr. et al. disclose a vehicular suspension arm with an I-beam section.

Kato, Nakamura et al., Kato et al., and Christophliemke et al. disclose a vehicular suspension arm with a particular cross-section.

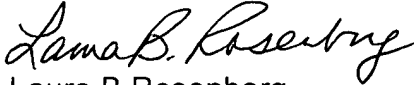
Huber et al. disclose a stabilizing strut with a specific cross-section.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura B. Rosenberg whose telephone number is (571) 272-6674. The examiner can normally be reached on Monday-Friday 7:00am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on (571) 272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Laura B Rosenberg
Patent Examiner
Art Unit 3616

LBR


DAVID R. DUNN
PRIMARY EXAMINER